OCT 1 7 2003 2

Subst. Form PTO-1449 PADENTAL APPLICANT'S INFORMATION DISCLOSURE STATEMENT	Atty. Docket No.: 22727/04130	Serial No.: 10/617,979
	Applicant: Henkin, et al.	
	Filing Date: July 11, 2003	Group:

U.S. PATENT DOCUMENTS

Initial*		Document No.	Date	Name	Class	Subcl.	Filing Date
	AA						
	AB					· · · · · · · · · · · · · · · · · · ·	†
	AC					1	
	AD					 	

FOREIGN PATENT DOCUMENTS

		Document No.	Date	Country	Class	Subcl.	Translation?
	AE					†	
	AF						
	AG						
	AH					 	
-	AI					 	

OTHER PRIOR ART

SW	AJ	Grundy, et al., "The T box and S box transcription termination systems", The Ohio State University, 1 page.			
	AK	Grundy, et al., "tRNA-mediated transcription antitermination in vitro: Codon-anticodon pairing independent of			
		the ribosome", PNAS, August 20, 2002, vol. 99, no. 17, pp. 11121-11126.			
SW	AL	Gerdeman, et al., "Solution Structure of the Bacillus subtilis T-box Antiterminator RNA: Seven Nucleotide			
		Bulge Characterized by Stacking and Flexibility", J. Mol. Biol. (2003) 326, pp. 189-201.			
	AM	Gerdeman, et al., "In Vitro structure-function studies of the Bacillus subtilis tyrS mRNA antiterminator: evidence			
		for factor-independent tRNA acceptor stem binding specificity", Nucleic Acids Research, 2002, Vol. 30, No. 4,			
		1065-1072.			
SW	AN	Yanofsky, "Transcription Attenuation: Once Viewed as a Novel Regulatory Strategy", Journal of Bacteriology, Jan. 2000, pp 1-8.			
SW	AO	Gollnick et al., "Transcription attenuation", Biochimica et Biophysica Acta 1577 (2002) pp. 240-250.			
SW	AP	Henkin, "Transcription termination control in bacteria", Current Opinion in Microbiology 2000, 3: pp. 149-153.			
SW	AQ	Barbieri et al., "MicroCorrespondence", 1998 Blackwell Science Ltd., Molecular Microbiology, 29, pp. 661-664.			
	AR	van de Guchte, et al., "Identity elements in tRNA-mediated transcription antitermination: implication of tRNA			
SW	_	D- and T-arms in mRNA recognition", Microbiology (2001), 147, pp. 1223-1233.			
Examiner:		Date Considered:			

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformation with MPEP 609; draw line through citation if in conformance and not considered. Include copy of this form with next communication to applicant.

/Samuel Woolwine/ (10/06/2006)

(0), y 4	<u> </u>
OCT 1 7 2003	FICE
The same	9
E CHOSE E	/

Subst. Form PTO-1449	Atty. Docket No.: 22727/04130	Serial No.: 10/617,979
APPLICANT'S INFORMATION DISCLOSURE STATEMENT		
	Applicant: Henkin, et al.	
	Filing Date: July 11, 2003	Group:

U.S. PATENT DOCUMENTS

Initial*		Document No.	Date	Name	Class	Subcl.	Filing Date
	AA						
	AB						
	AC						
	AD					<u> </u>	

FOREIGN PATENT DOCUMENTS

	Document No.	Date	Country	Class	Subcl.	Translation?
AF					ļ	
AF					<u> </u>	
AC	;					
Al	[
AI					<u> </u>	<u> </u>

OTHER PRIOR ART

SW	AXS	Kunst, et al., "The complete genome sequence of the Gram-positive bacterium Bacillus subtilis", Nature, Vol. 390, 20 November 1997, pp. 249-256.
SW	AKT	Grundy, et al., "Sequence requirements for terminators and antiterminators in the T box transcription antitermination system: disparity between conservation and functional requirements", Nucleic Acids Research 2002, Vol. 30, No. 7, pp. 1646-1655.
SW	ALU	Henkin, "Control of Transcription Termination in Prokaryotes,", Annu. Rev. Genet. 1996, 30: pp. 35-57.
SW		Henkin, et al., "Regulation by transcription attenuation in bacteria: how RNA provides instructions for transcription termination/antitermination decisions", BioEssays 24: pp. 700-707.
SW		Grundy et al., "The Staphylococcus aureus ileS Gene, Encoding Isoleucyl-tRNA Synthetase, Is a Member of the T-Box Family", Journal of Bacteriology, June 1997, pp. 3767-3772.
	AOX	Putzer, et al., "Transfer RNA-mediated antitermination in vitro", Nucleic Acids Research, 2002, Vol. 30, No. 14
		pp. 3026-3033.
SW	ARY	Wagar, et al., "The Glycyl-tRNA Synthetase of Chlamydia trachomatis", Journal of Bacteriology, Sept. 1995, pp 5179-5185.
	AQ	
	AR	
xaminer:		Date Considered:

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformation with MPEP 609; draw line through citation if in conformance and not considered. Include copy of this form with next communication to applicant.

/Samuel Woolwine/ (10/06/2006)

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE U.S. DEPARTMENT OF COMMERCE U.S. DEPARTMENT OF COMMERCE U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE U.S. DEPARTMENT OF U.S. DEPARTMENT OF U.S. DEPARTMENT OF U.S. DEPART

titute for form 1449/PTO

Sheet 1

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

of 2

]		
Application Number	10/617,979	
Filing Date	July 11, 2003	
First Named Inventor	Henkin	
Art Unit		
Examiner Name		
Attorney Docket Number	22727/04130	

Complete if Known

Examiner	Cite	Document Number	U. S. PATENT D Publication Date	Name of Patentee or	Pages Columns Lines Where
Initials*	Cite No.1	Number-Kind Code ^{2 (# known)}	MM-DD-YYYY	Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	 	US-	 		
		03-		·	
		US-			
		US-			
		US-			
		US-	1.		
		US-			- 1111111111111111111111111111111111111
		US-	†		
		US-			
	 	US-			
· · ·	 	US-			
		US-	 		
	<u> </u>	US-			
		US∙			<u> </u>
		US-		. =	
		US-		· · · · · · · · · · · · · · · · · · ·	
		US-			
		US-	†		
		US-			
	<u> </u>	US-	1		

		FORE	IGN PATENT DOCU	MENTS		
Examiner Cite Initials* No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	Γ	
		Country Code ^{3 -} Number ^{4 -} Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	1
						Ļ
	 -					╁
						t
						ſ
						٢

Examiner Signature	/Samuel Woolwine/	(10/06/2006)	Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0551-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

er the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute 1449/PTO				Complete if Known		
ENT 8 TR	ADE			Application Number	10/617,979	
INF	ORMATION	I DIS	CLOSURE	Filing Dat	July 11, 2003	
STATEMENT BY APPLICANT			PPLICANT	First Named Inventor	Henkin	
	(Uso as many she	sote se n	acass and	Art Unit	3736	
(Use as many sheets as necessary)			ecessary	Examiner Name		
Sheet	2	of	2	Attorney Docket Number	22727/04130	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Yousef, et al., "tRNA requirements for glvQS antitermination: A new twist	
	AA	on tRNA", RNA (2003), 9:1148-1156.	
		·	
····•			
,			
			<u> </u>
	<u> </u>		

Examiner Signature	/Samuel Woolwine/	(10/06/2006)	Date Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE e Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Stitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete it Known				
Application Number	10/617,979			
Filing Date	July 11, 2003			
First Named Inventor	Henkin			
Art Unit	1632			
Examiner Name	Unknown			
Attorney Docket Number	22727/04130	•		

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ^{2 (f Innom)}	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	 	I/S		124	
		^{US-} 6,022,983	2/2000	Wuonola et al.	
		US-			
		US-	1		

			<u>IGN PATENT DOCU</u>	MENTS		
Examiner Initials*	Cite No.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code ³ "Number ⁴ "Kind Code ⁵ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	T
			1	-		
						Γ
						1

Examiner Signature /Samuel Woolwine/ (10/06/2006)	Date Considered	
---	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERC.

Substitu	Substitute for form 1449/PTO		Complete if Known		
000300				Application Number	10/617,979
INF	ORMATION	DIS	CLOSURE	Filing Date	July 11, 2003
STA	ATEMENT E	BY A	PPLICANT	First Named Inventor	Henkin
	(Uso os many cho	ata na m	agar canad	Art Unit	1632
(Use as many sheets as necessary)				Examiner Name	Unknown
Sheet	2	of	2	Attorney Docket Number	22727/04130

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AA	SARSERO, ET AL., "A Bacillus subtilis operon containing genes of unknown function senses IRNA charging and regulates expression of the genes of tryptophan biosynthesis", PNAS,	
	AA	March 14, 2000, vol. 97, no. 6, pp. 2656-2661,	
	AB	DELORME, ET AL., "Regulation of Expression of the Lactococcus lactis Histidine Operon", Journal of Bacteriology, April 1999, p. 2026-2037.	

Examiner	/ ((10/06/2006)	Date	•
Signature	/Samuel Woolwine/	(10/06/2006)	Considered	

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/08A (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE on Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

Sheet 1

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known				
Application Number	10/617,979			
Filing Date	July 11, 2003			
First Named Inventor	Tina Henkin			
Art Unit	1637			
Examiner Name	Young J. Kim			
Attorney Docket Number	22727 04120			

Examiner	Cite	Document Number	U. S. PATENT	Name of Patentee or	Pages, Columns, Lines, Where
Initials*	No.1	Number-Kind Code ^{2 (# known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear
SW		^{US-} 6,022,983	02-08-2000	Wuonola, et al.	
		US-			
	· ·	US-			
		US-			
•		US-			
	·	US-	<u> </u>		
-		US-			
		US-			

		FORE	IGN PATENT DOCU	MENTS		
Examiner Cite Initials No.		Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	
		Country Code ³ Number ⁴ Kind Code ⁶ (if known)	MM-DD-YYYY		Or Relevant Figures Appear	۲۴

Examiner	/Samuel Woolwine/	(10/06/2006)	Date Considered	
Signature	/ Damaci Wootwille/	(10/00/2000)	Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the Individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

PTO/SB/08B (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

	Substitute for form 1449/PTO		Complete if Known		
				Application Number	10/617,979
INF	ORMATION	DIS	CLOSURE	Filing Date	July 11, 2003
STA	ATEMENT B	BY A	PPLICANT	First Named Inventor	Tina Henkin
	(Use as many she	ate se n	acossani)	Art Unit	1637
	(030 03 11101) 3110	013 03 11		Examiner Name	Young J. Kim
Sheet	2	of	2	Attorney Docket Number	22727.04130

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
SW	1	International search report for PCT application number PCT/US03/21875.	
SW	2	GERDEMAN, et al, In vitro structure-function studies of teh Bacillus subtillis tyrS mRNA antiterminator: evidence, Nucleic Acids Research, Vol 30, No 4, pp 1065-1072, Feb 2002	
SW	3	YOUSEF, et al., tRNA requirement for glyQA antitermination: A new twist on tRNA, RNA, Vol. 9, pp. 1148-1156, May 2003.	
SW	4	GRUNDY, et al., tRNA-mediated transcription antitermination in vitro: Codon-anticodon pairing independent of the ribosome, PNAS, Vol 99, No 17, pp 11121-11126, August 2002.	
SW	5	PUTZER, et al., Transfer RNA-mediated antitermination in vitro, Nucleic Acids Research, Vol. 30, No. 14, pp. 3026-3033, 2002.	
SW	6	SASERO, et al., A Bacillus subtilis operon cntaining genes of unknown function senses tRNA trp charing and regulates expression, PNAS, Vol 97, No 6, pp 2656-2661, March 2000.	
SW	7	DELORME, et al., Regulation of Expression of the Lactococcus lactis Histidine Operon, Journal of Bacteriology, Vol. 181, No. 7, pp 2026-2037, April 1999.	
		·	

Signature	(10/06/2006)	Considered	· I

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the Individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.